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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/770,238 | 01/29/2001 | Mitsuo Saeki | 1080. 1090/JDH | 6797 |

21171 7590 06/18/2004

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

STERRETT, JEFFREY L

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 06/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|--|---|--|--|
| <p align="center">Office Action Summary</p> | <p>Application No.</p> <p>09/770,238</p> | <p>Applicant(s)</p> <p>SAEKI ET AL.</p> | |
| | <p>Examiner</p> <p>Jeffrey L. Sterrett</p> | <p>Art Unit</p> <p>2838</p> | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-7, 9-14, 16-21, 23-28 and 30-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-7, 9-14, 16-21, 23-28 and 30-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The text of those sections of Title 35, U.S. Code not included in this action can be found in the prior Office action. Also the explanations of how the references are being applied can be found in the prior Office action.
2. Claims 2-4, 7, 9-11, 14, 16-18, 21, 23-25, 28, 30-32, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Walker et al.
3. Claims 3, 4, 7, 9-11, 14, 16-18, 21, 24, 25, 28, 31, 32, and 35-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilcox.
4. Claims 3, 4, 6, 7, 9-11, 13, 14, 16-18, 20, 21, 24, 25, 27, 28, 31, 32, and 34-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Chaney et al.
5. Claims 2, 23, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Wilcox or Chaney et al in view of Walker et al.
6. Claims 5, 12, 19, 26, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaney et al in view of Suzuki et al et al.
7. Applicant's arguments filed May 3, 2004 have been fully considered but they are not persuasive.

In regards to the remarks concerning the alleged distinction of simultaneous switch turn on, the disclosed invention apparently does in fact distinguish over the cited references however the invention as recited by the claims does not. Independent claims 7, 14, 21, 28, and 35-40 merely recite that "the detection circuit monitors a driving signal that drives the main switch and the synchronous switch to detect a state that the main switch and the synchronous switch are simultaneously turned on". As agreed during the April 21, 2004 interview, the cited references infer the simultaneous

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switch turn on of the main switch and the synchronous switch from the drive signals provided to the main and synchronous switches whereas it was also agreed that applicant's invention literally detects the simultaneous turn on of the main switch and the synchronous by detecting the voltage across the synchronous switch. Thus as presently recited the claims do not adequately differentiate over the inferred simultaneous conduction of the cited prior art by clearly and distinctly setting forth the detection of actual simultaneous conduction based upon the determination of the conduction status of one of the switches by detecting the voltage across the synchronous switch for example.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

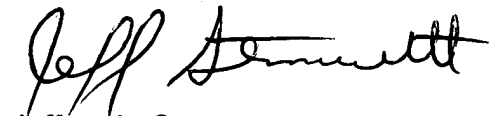
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey L. Sterrett whose telephone number is (571)

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272-2085. The examiner can normally be reached on Monday-Thursday & 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeffrey L. Sterrett
Primary Examiner
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